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KLARQUIST SPARKMAN, LLP  
121 SW SALMON STREET  
SUITE 1600  
PORTLAND, OR 97204

EXAMINER
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DARROW, JUSTIN T

ART UNIT	PAPER NUMBER
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2132

DATE MAILED: 12/18/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/767,617

Applicant(s)

GOHL

Examiner

Justin T. Darrow

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6, 10-13, 15-18 and 20-22 is/are rejected.
- 7) ☒ Claim(s) 4, 7-9, 14, 19, 23 and 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Claims 1-24 have been examined.

#### ***Claim Objections***

2. Claim 9 is objected to because of the following informality: delete "1" in line 1 and replace with --4--. Appropriate correction is required.
3. Claim 14 is objected to because of the following informality: delete "sender" in line 2 and replace with --first terminal--. Appropriate correction is required.
4. Claim 19 is objected to because of the following informality: delete "11" in line 1 and replace with --14--. Appropriate correction is required.
5. Claim 24 is objected to because of the following informality: delete "user" in line 3 and replace with --second terminal--. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 17 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17 recites the limitation "the requested string" in line 1. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-3, 11-13, 21, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Stambler, U.S. Patent No. 5,793,302 A.

As per claim 1, Stambler shows a method for authenticating a first terminal to a second terminal comprising: synchronizing the random number generator at a bank with that at a recipient and generating a coded arbitrary number (CRNX) from a generated random number (RNX) (see column 8, lines 16-23 and figure 8A, items 44, 46, and 70); transferring the coded arbitrary number (CRNX) to the remote bank CPU (see column 8, lines 23-28 and figure 8A, items 48 and 62); processing the recipient's PIN to produce a coded PIN, CPNR, which is applied as the key input to a coder which in turn produces the coded random number, CNRX (see column 5, lines 62-67; column 6, lines 1-5; and figure 8A, items 40, 42, 44, 46, and 48); communicating the authentication of the recipient's identity by comparing the coded random number with a coded random number produced from the synchronized random number (RNX) and the coded PIN, CPNR, in the bank's file (see column 6, lines 22-45 and figure 8A, items 62, 64, 66, 68, 70, 71, and 72); and conveying all of the information about the transaction (see column 6, lines 41-45).

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As per claim 2, Stambler further shows that the coded arbitrary number (CRNX) is generated from a random number (RNX) (see column 6, lines 1-4 and figure 8A, item 46).

As per claim 3, Stambler also embodies that the coded PIN (CPNR) is coded with the transmission date and time (see column 8, lines 4-9).

As per claim 11, Stambler depicts a method for authenticating a first terminal to a second terminal comprising: synchronizing the random number generator at a bank with that at a recipient and generating a coded arbitrary number (CRNX) from a generated random number (RNX) (see column 8, lines 16-23 and figure 8A, items 44, 46, and 70) and storing the random number (RNX) with recipient's file (see column 6, lines 22-28 and figure 46, 68, and 70); synchronizing the random number generators at the recipient terminal and the remote bank CPU to generate the same random number (see column 8, lines 16-23 and figure 8A, items 46 and 70); processing the recipient's PIN to produce a coded PIN, CPNR, which is applied as the key input to a coder which in turn produces the coded random number, CNRX (see column 5, lines 62-67; column 6, lines 1-5; and figure 8A, items 40, 42, 44, 46, and 48); transferring the coded arbitrary number (CRNX) to the remote bank CPU (see column 8, lines 23-28 and figure 8A, items 48 and 62); comparing the coded random number with a coded random number produced from the synchronized random number (RNX) and the coded PIN, CPNR, in the bank's file (see column 6, lines 22-45 and figure 8A, items 62, 64, 66, 68, 70, 71, and 72); and, if the coded random numbers match, authenticating the recipient's identity (see column 6, lines 38-42 and figure 8A, items 62, 64, 66, 71, and 72).

As per claim 12, Stambler further shows that the coded arbitrary number (CRNX) is generated from a random number (RNX) (see column 6, lines 1-4 and figure 8A, item 46).

As per claim 13, Stambler also embodies that the coded PIN (CPNR) is coded with the transmission date and time (see column 8, lines 4-9).

As per claim 21, Stambler describes an authentication terminal comprising: a recipient's file storing the random number (RNX) (see column 6, lines 22-28 and figure 46, 68, and 70); synchronizing the random number generator at a bank with that at a recipient and generating a coded arbitrary number (CRNX) from a generated random number (RNX) (see column 8, lines 16-23 and figure 8A, items 44, 46, and 70); transferring the coded arbitrary number (CRNX) to the remote bank CPU (see column 8, lines 23-28 and figure 8A, items 48 and 62); comparing the coded random number with a coded random number produced from the synchronized random number (RNX) and the coded PIN, CPNR, in the bank's file (see column 6, lines 22-45 and figure 8A, items 62, 64, 66, 68, 70, 71, and 72); and, if the coded random numbers match, authenticating the recipient's identity (see column 6, lines 38-42 and figure 8A, items 62, 64, 66, 71, and 72).

As per claim 22, Stambler also embodies that the coded PIN (CPNR) is coded with the transmission date and time (see column 8, lines 4-9).

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stambler, U.S. Patent No. 5,793,302 A as applied to claim 1 above, and further in view of Leith et al., U.S. Patent No. 5,196,840 A.

As per claim 5, Stambler shows the method of claim 1. However, he does not explicitly teach block addition. Leith et al. disclose adding random numbers to the PIN (see column 8, lines 60-67 and figure 5, block 114). Therefore, it would have been obvious to one of ordinary skill in the computer art at the time the invention was made to combine the method for authenticating a first terminal to a second terminal of Stambler with the addition of random numbers of Leith et al. to enhance the security of the system by making it much more difficult for the PIN to be determined or calculated from intercepted data (see column 11, lines 42-46).

As per claim 6, Leith et al. additionally embody adding randomness to different combinations of the PIN (see column 11, lines 15-41 and figure 9). Therefore, it would have been obvious to one of ordinary skill in the computer art at the time the invention was made to combine the method for authenticating a first terminal to a second terminal of Stambler with the addition of random numbers of Leith et al. to enhance the security of the system by making it

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much more difficult for the PIN to be determined or calculated from intercepted data (see column 11, lines 42-46).

12. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stambler, U.S. Patent No. 5,793,302 A as applied to claim 1 above, and further in view of Harkins, U.S. Patent No. 6,151,395 A.

Stambler shows the method of claim 1. Although he embodies that the coded PIN (CPNR) is coded with the transmission date and time (see column 8, lines 4-9), he does not specifically describe opening another communications session using a string that is an element of an ordered series and in which the string of the prior communications session is the preceding element of the same ordered series. Harkins elaborates communications sessions between a party A and B where a key is incremented by one for successive sessions (see column 4, lines 32-46; column 9, lines 32-67; column 10, lines 1-6; and figures 6A and 6B). Therefore, it would have been obvious to one of ordinary skill in the computer art at the time the invention was made to combine the method for authenticating a first terminal to a second terminal of Stambler with the incrementing of the key by one for successive communication session of Harkins so that an authorized law enforcement officer (LEO) may decrypt and inspect the encrypted messages involved in a desired communication session (see column 10, lines 7-10).



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13. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stambler, U.S. Patent No. 5,793,302 A as applied to claim 11 above, and further in view of Leith et al., U.S. Patent No. 5,196,840 A.

As per claim 15, Stambler shows the method of claim 11. However, he does not explicitly teach block addition. Leith et al. disclose adding random numbers to the PIN (see column 8, lines 60-67 and figure 5, block 114). Therefore, it would have been obvious to one of ordinary skill in the computer art at the time the invention was made to combine the method for authenticating a first terminal to a second terminal of Stambler with the addition of random numbers of Leith et al. to enhance the security of the system by making it much more difficult for the PIN to be determined or calculated from intercepted data (see column 11, lines 42-46).

As per claim 16, Leith et al. additionally embody adding randomness to different combinations of the PIN (see column 11, lines 15-41 and figure 9). Therefore, it would have been obvious to one of ordinary skill in the computer art at the time the invention was made to combine the method for authenticating a first terminal to a second terminal of Stambler with the addition of random numbers of Leith et al. to enhance the security of the system by making it much more difficult for the PIN to be determined or calculated from intercepted data (see column 11, lines 42-46).

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14. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stambler, U.S. Patent No. 5,793,302 A as applied to claim 11 above, and further in view of Harkins, U.S. Patent No. 6,151,395 A.

Stambler shows the method of claim 10. Although he embodies that the coded PIN (CPNR) is coded with the transmission date and time (see column 8, lines 4-9), he does not specifically describe opening another communications session using a string that is an element of an ordered series and in which the string of the prior communications session is the preceding element of the same ordered series. Harkins elaborates communications sessions between a party A and B where a key is incremented by one for successive sessions (see column 4, lines 32-46; column 9, lines 32-67; column 10, lines 1-6; and figures 6A and 6B). Therefore, it would have been obvious to one of ordinary skill in the computer art at the time the invention was made to combine the method for authenticating a first terminal to a second terminal of Stambler with the incrementing of the key by one for successive communication session of Harkins so that an authorized law enforcement officer (LEO) may decrypt and inspect the encrypted messages involved in a desired communication session (see column 10, lines 7-10).

***Allowable Subject Matter***

15. Claims 4, 7-9, 14, 19, 23, and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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16. Claims 17 and 18 would be allowable if rewritten to overcome the rejection under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

17. The following is a statement of reasons for the indication of allowable subject matter:

Claims 4 and 9; and 14 and 19 are drawn to methods of authenticating a first terminal to a second terminal, respectively. The closest prior art, Stambler, U.S. Patent No. 5,793,302 A, discloses similar methods. However, Stambler neither shows nor motivates merging a string with a password using an applet at the first terminal, executing an encryption algorithm with a unique merging key. This composite step explicitly recited in intervening claims 4 and 14 renders claims 4 and 9; and 14 and 19, respectively, to have allowable subject matter.

Claims 7 and 8; and 17 and 18 are drawn to methods of authenticating a first terminal to a second terminal, respectively. The closest prior art, Stambler, U.S. Patent No. 5,793,302 A, discloses similar methods. However, Stambler neither depicts nor suggests obtaining the requested string by receiving a web page containing a program for generating requests and the string. This distinct step explicitly recited in intervening claims 7 and 17 renders claims 7 and 8; and 17 and 18, respectively, to have allowable subject matter.

Claim 23 is drawn to an authentication terminal. The closest prior art, Stambler, U.S. Patent No. 5,793,302 A, discloses a similar terminal. However, Stambler neither describes nor motivates an encryption library coupled to the processor to generate the expected identification code by merging the merge string with the second terminal password using an encryption algorithm with a merging key unique to the second terminal. This particular feature explicitly recited in dependent claim 23 renders it to have allowable subject matter

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Claim 24 is drawn to an authentication terminal. The closest prior art, Stambler, U.S. Patent No. 5,793,302 A, discloses a similar terminal. However, Stambler neither shows nor implies an authenticating web server transmitting a web page to a second terminal containing a program for merging the second terminal password and the merge string. This composite step explicitly recited in dependent claim 24 renders it to have allowable subject matter.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin T. Darrow whose telephone number is (703) 305-3872 and whose electronic mail address is justin.darrow@uspto.gov. The examiner can normally be reached Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barrón, Jr., can be reached at (703) 305-1830.


The fax number for Formal or Official faxes to Technology Center 2100 is (703) 872-9306. In order for a formal paper transmitted by fax to be entered into the application file, the paper and/or fax cover sheet must be signed by a representative for the applicant. Faxed formal papers for application file entry, such as amendments adding claims, extensions of time, and statutory disclaimers for which fees must be charged before entry, must be transmitted with an authorization to charge a deposit account to cover such fees. It is also recommended that the cover sheet for the fax of a formal paper have printed "**OFFICIAL FAX**". Formal papers transmitted by fax usually require three business days for entry into the application file and consideration by the examiner. Formal or Official faxes including amendments after final

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rejection (37 CFR 1.116) should be submitted to (703) 872-9306 for expedited entry into the application file. It is further recommended that the cover sheet for the fax containing an amendment after final rejection have printed not only **"OFFICIAL FAX"** but also **"AMENDMENT AFTER FINAL"**.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

December 15, 2003

  
**JUSTIN T. DARROW**  
**PRIMARY EXAMINER**  
**TECHNOLOGY CENTER 2100**